long distances and higher speeds that are included in the national statistics would be uncommon in this project and the number of driver-years would be very low, therefore no transportation fatalities are expected for this project.

The nonfatal occupational injury and illness rate in the U.S. for the occupational category including public utilities is 8.7 per 100 workers per year. At this rate and assuming the worker statistics previously mentioned for the Proposed Action, about three nonfatal injuries/illnesses can be expected for the project.

5.0 CUMULATIVE EFFECTS

Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes them. These effects can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

This section considers the Proposed Action and possible effects on resources in context to any ongoing or reasonably foreseeable future actions. The cumulative effects on resources are discussed further in this section. This analysis concludes that there could be cumulative effects on land use, transportation, infrastructure, visual, noise, health effects, cultural resources, water quality, air quality, and PRSs or other aspects of the environment.

5.1 Activities in the Vicinity of the Proposed Gas Pipeline Easement

5.1.1 Conveyance and Transfer

A portion of the proposed easement of the 12-in. (30-cm) gas pipeline is located within the White Rock Y Tract identified in the Record of Decision for the *Conveyance and Transfer of Certain Lands Administered by the Department of Energy and Located at Los Alamos National Laboratory, Los Alamos and Santa Fe Counties, New Mexico* (DOE 1999b). It is anticipated that these lands would be used for either cultural preservation were they to be transferred to San Ildefonso Pueblo; or kept as natural areas or used for transportation and utility improvements were they to be transferred to Los Alamos County. Consequently, there could be other future construction or operational activities that would contribute to cumulative effects on land use, transportation, infrastructure, visual, noise, health effects, water quality, air quality, and PRSs in Los Alamos Canyon or adjacent areas if DOE modified its original Record of Decision to allow the transfer or conveyance of this land tract.

5.1.2 Advanced Hydrotest Facility

The conceptualized AHF would be the next generation hydrodynamic test facility following the Dual-Axis Radiographic Hydrodynamic Test Facility at LANL. AHF would be an improved radiographic facility that would provide for imaging on more than two axes, each with multiple time frames, though the number of axes and time frames needed for such imaging is still subject to requirements definition and design evolution. The facility would be used to better reveal the evolution of weapon primary implosion symmetry and boost-cavity shape under normal conditions and in accident scenarios (DOE 1996).

Currently, the feasibility and definition of an AHF is still insufficiently determined for NNSA DOE to propose such a facility and analyze potential environmental effects that would be associated with its construction and operation. Performance requirements and specifications have not been fully established. The type of technology to provide the basis for the facility has not been determined, and concepts for the resultant physical plant would vary accordingly (DOE 1996). As a result, there currently would not be any known cumulative effects associated with the AHF project with regard to the Proposed Action.

5.1.3 Omega West Demolition

The Omega West Facility (OWF) is located in Los Alamos Canyon approximately 2 mi (3.2 km) west (upstream) of the natural gas valve setting where the new gas pipeline would be connected to the existing pipeline. The OWF and associated structures were originally constructed in 1944 and are of advanced age and not in a condition suitable for renovation. The OWF remains vulnerable to damage from the increased risk of flooding and mudflows as a result of the Cerro Grande Fire in 2000. Any structural damage could lead to the spread of radiological contamination. Consequently, the entire OWF is to be demolished and the wastes properly disposed of.

Emissions associated with vehicle and equipment exhaust as well as radiological and particulate (dust) emissions could result from demolition activities. Disturbed contaminated soils could potentially cause an increase in the transportation of tritium and other radiological contaminants downstream during flooding events.

An EA for the demolition of the OWF has been prepared (DOE/EA-1410) in which these effects were analyzed. The conclusions reached in this EA indicate that no discernable effects on air quality would result and adverse effects on water quality and soils are not anticipated. Therefore, no cumulative effects would be anticipated from the demolition of the OWF.

5.1.4 Post Cerro Grande Fire Cleanup

Approximately 915 cubic yards (yd^3) (700 cubic meters [m^3]) of contaminated surface silt and soil were removed from a 2.5-ac (1.0-ha) site in Los Alamos Canyon east of the confluence of DP and Los Alamos Canyons in June of 2000 (DOE 2000a). The soil was removed to minimize the overall potential for contaminant migration in the event of a severe flood. Removal of this soil and disturbance of the site is not expected to have resulted in adverse effects on water quality and, therefore, there should be no anticipated cumulative effects. Removal of the contaminated soil could have a long-term beneficial effect by reducing the likelihood of contaminant transport downstream.

5.1.5 TA-21 PRS Cleanup

Thirteen PRSs have been identified within the TA-21 "West" tract slated for transfer to Los Alamos County. Seven of these PRSs would need to be cleaned up or proposed for no further action before the transfer can take place. The other six require no further action. All cleanup work for this tract is expected to be complete by November 2003. Cleanup of these PRSs will minimize migration of contaminants into DP Canyon; a tributary of Los Alamos Canyon. Thus, these remediation activities would have a beneficial cumulative effect on Los Alamos Canyon by reducing the overall contaminant load.